

**I. REMARKS**

The final Office Action dated August 21, 2007, has been received and carefully noted. The following remarks are being submitted as a full and complete response thereto.

Claims 1-10 are pending. No amendments to the specification or claims are made at this time. Applicants respectfully request reconsideration and allowance of present claims 1-10.

Claims 1-10 are again rejected under 35 U.S.C. § 112, first paragraph, for insufficient written description. This rejection is traversed.

Further to the remarks in Applicants' previously filed Responses, Applicants respectfully maintain that specification provides sufficient written description to support the presently claimed invention.

As previously noted, present claim 1 discloses "substituting CFC 11 in its entirety with azeotropic or near azeotropic foaming agents compositions" and claim 9 discloses "the substitution of CFC-11 in its entirety with foaming agent azeotropic or near azeotropic compositions." Applicants recall that the technical problem of the present invention was to find, in a process for foaming polyurethanes using CFC 11, foaming agents that could substitute for CFC 11. See, for example, page 2, lines 1-3, and page 4, lines 20-23 of the specification. Applicants have shown in Table 14 on page 33 that compositions of present claim 1 work as substitutes of CFC 11. For example, Applicants have shown that both compositions comprising HFPE1/HFC 365 mfc (example γ) and HFPE1/HFC 356 ffa (example δ) can substitute for CFC 11 (see example α).

Further, in the Response filed October 12, 2006, Applicants demonstrated in Table A on page 8 that the amount of the various components, calculated as % by weight of the total amount of each of the above compositions, show a very similar content to the composition of example  $\alpha$ , example  $\gamma$ , and example  $\delta$ . In fact, the difference in the amount of the foaming agent was no more than 1% of the total composition. See, for example, pages 4 and 5 of the October 12, 2006 Response. While slightly higher variations were found for the diisocyanate, this compound is generally added in the foaming polyurethane compositions in excess to the requested (stoichiometric) quantity.

Applicants also note that the results reported in Table 14 for foam density and foam appearance show that the differences among the compositions do not affect the solution found by Applicants to the technical problem of the presently claimed invention - that the azeotropic or near azeotropic mixtures of present claim 1 can be used as substitutes of CFC 11.

As to the assertion in the Office Action of a difference in foam density with respect to that obtained in example  $\alpha$ , Applicants note that the difference does not exist in example  $\gamma$ , whereas it is equal to 0.7% in example  $\delta$ . Those of skill in the art would likely not have recognized this asserted difference, as it is within the bounds of experimental error as it is less than 1% difference. As such, Applicants submit that those of skill in the art would have viewed the foam density figures of examples  $\alpha$ ,  $\gamma$  and  $\delta$  to be the same.

Further, in view of the results for foam density reported in Table 14, those of skill in the art would have expected that the same results would be obtained when the quantity of each component is the same in each of said compositions, as confirmed by the results

shown in the previously submitted Declaration of Dr. Nicoletti. Applicants submit that there is sufficient support demonstrating that the claimed foam density of about 30 Kg/cm<sup>3</sup> would be obtained by polyurethane polymer foaming compositions encompassed by the present claims. Further, as noted in the Applicants' previously filed remarks, those of skill in the art could have prepared a foam with the claimed density containing the same number of moles for composition IV) or V), as the number of moles of CFC 11 that allows one of skill in the art to obtain the claimed foam density may be calculated from Table 14 on page 33 of the specification.

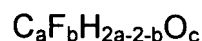
For at least the above reasons and further to the previously filed remarks, Applicants submit that the specification and originally filed claims provide sufficient support for the present claims. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-10 under 35 U.S.C. § 112, first paragraph, for insufficient written description.

Claims 1-4, 9 and 10 are again rejected under 35 U.S.C. § 102(b) as being anticipated by Klug et al. (U.S. Patent Nos. 5,605,882, 5,648,016, and 5,779,931). This rejection is again traversed.

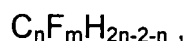
Further to the previously filed remarks distinguishing the patents to Klug et al. from the presently claimed invention, Applicants submit that the specification and the Declaration of Dr. Nicoletti filed May 24, 2007 provides sufficient support for the substitution of CFC 11 with blowing agents other than HFPE1/MFC 365 mfc (60/40). For example, Table 14 on page 33 of the specification shows that the foaming agent HFPE1/HFC 365 mfc gives the same results of density and foam homogeneity as the

foaming agent HFPE1/HFC 356 ffa, such that those of skill in the art would have expected that either composition could be used as a substitute of CFC 11 in polyurethane foams.

Further, Applicants again emphasize that the patents to Klug et al. do not teach or suggest a process for foaming polyurethanes using CFC 11 is described, wherein CFC 11 is substituted with the foaming agents compositions IV (HFPE1+HFC 365 mfc) and V (HFPE1 + HFC 356 ffa) of present claim 1. In addition, the Examiner has never indicated in which part of the patents to Klug et al. compositions IV and V are disclosed or suggested. In fact, Applicants again note that Klug et al. does not even mention HFC 365 mfc or HFC 356 ffa. In contrast, the Office Action only stated that the disclosed formulas are not so "extensive" that one could not have envisaged the claimed combination of fluoroether and fluorocarbon. However, Applicants are unclear as to the meaning of the term "extensive" to the Examiner, as Klug '882 discloses approximately 122 different azeotropic compositions, none of which comprise HFPE1 with HFC 365 mfc or HFC 356 ffa. As such, the combinations between each single hydrofluoroether compound falling in the formula:



with each single hydrofluorocarbon compound falling in formula:



(see in Klug et al. the meanings of the subscripts a, b, c, n and m) are so extensive that even 122 different combinations of a hydrofluoroether and of a hydrofluorocarbon fail to disclose the combination of the present claims. Therefore, Applicants respectfully submit

that those of skill in the art could not have envisaged the claimed combination of fluoroether and fluorocarbon from the disclosure of the patents to Klug et al.

As Klug et al. does not disclose each and every element of independent claims 1 and 9, Applicants maintain that the patents to Klug et al., alone or in combination, do not anticipate these claims. Dependent claims 2-4 and 10 are patentable for at least the same reasons. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-4, 9, and 10 under 35 U.S.C. § 102(b) over the patents to Klug et al.

Claims 1-4, 9 and 10 are again rejected under 35 U.S.C. § 103(a) as being unpatentable over the patents to Klug et al. This rejection is again traversed.

Further to the remarks above and the previously filed remarks, Applicants respectfully maintain that the particular combinations of compositions (IV) and (V) of claims 1 and 9 would not have been obvious over the broad disclosure of the patents to Klug et al., much less that the blowing mixtures could be substituted for CFC 11, and therefore solve the technical problem of the presently claimed invention. Applicants also maintain that the patents to Klug et al. do not disclose or otherwise identify the density of the CFC 11 polyurethane foams. Without knowledge of such a density reference value, those of skill in the art would not have been able to control or optimize the density of the foam being prepared, as asserted in the Office Action.

Applicants again note that the previously filed Declaration of Dr. Basile discloses that what matters for purposes of the presently claimed invention is that a foaming composition gives a foam having the same density in the same condition of that

corresponding containing CFC 11. The Declaration shows that this does not seem the case for the compositions of Klug et al. In fact, the Declaration shows that some of the compositions of the patents to Klug et al. expanded in the same conditions of CFC 11 foams, did not foam at all, only partly foamed, and/or gave fully expanded foams with higher foam densities than that of CFC 11. Therefore, in order to arrive to the presently claimed invention, those of skill in the art must have identified foaming agent compositions that behave as the CFC 11 foaming compositions, which is not taught or suggested by the patents to Klug et al.

As to the remarks relating to the Declaration of Dr. Basile on page 7 of the Office Action, Applicants note that Dr. Basile followed the same procedure indicated by the Examiner. In fact, he tested not only one, but seven different azeotropic or near azeotropic compositions out of the 122 disclosed by Klug '892. Dr. Basile found that none of the seven tested compositions from Klug et al. were suitable as substitutes of CFC 11. As the patents to Klug et al. do not teach or suggest any particular experiments or adaptations that one of skill in the art could have made in order to obtain the presently claimed invention, Applicants respectfully submit that the Declaration of Dr. Basile is sufficient to distinguish the compositions of the patents to Klug et al. and demonstrate the novelty of the presently claimed invention.

As to the assertion on page 7 of the Office Action that routine experimentation could have been used to determine optimal blowing agent formulations with more environmentally safe blowing agents, Applicants again remark that the problem at issue is to substitute the foaming agent CFC 11. It is well known to those of skill in the art that

blowing agents do not have the same properties relating to foam formation. Further, there is not teaching or suggestion in the patents to Klug et al. to maintain the foam formation properties of CFC 11 while substituting different blowing agents, much less those of the presently claimed invention.

As the patents to Klug et al. do not teach or suggest all of the elements of the claims 1-4, 9 and 10, Applicants maintain that these claims would not have been obvious to those of skill in the art over the disclosures of the cited patents to Klug et al., alone or in combination. As such, Applicants again respectfully request reconsideration and withdrawal of the rejection of claims 1-4, 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over the patents to Klug et al.

Claims 5-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the patents to Klug et al. in view of Barthelemy et al. (U.S. Patent No. 5,304,320). This rejection is traversed.

Please see the above discussion distinguishing claim 1 from the patents to Klug et al. As claims 5-7 are dependent upon claim 1, Applicants submit that claims 5-7 are patentable for at least the same reasons as claim 1. Applicants maintain that Barthelemy et al. does not satisfy the deficiencies of the patents to Klug et al. Please see Applicants' previously remarks distinguishing Barthelemy et al.

As the cited references do not teach or suggest all of the elements of claims 5-7, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 5-7 under 35 U.S.C. § 103(a) over the patents to Klug et al. in view of Barthelemy et al.

## II. CONCLUSION

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

In the event that this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to Counsel's Deposit Account Number 01-2300, referencing Docket Number **108910-00123**.

Respectfully submitted,



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